

CLAIMS IN THE APPLICATION

- 1-22 (canceled).
23. (new) A method for producing plants with increased tocopherol, vitamin K, chlorophyll and/or carotenoid contents which comprises expressing a DNA sequence coding for a 1-deoxy-D-xylulose-5-phosphate synthase in plants.
24. (new) The method as claimed in claim 23, wherein the 1-deoxy-xylulose-5-phosphate synthase is encoded by the DNA sequence SEQ ID NO: 1 or SEQ ID NO: 3 or a DNA sequence which hybridizes with one of said sequences and coding for a 1-deoxy-D-xylulose-5-phosphate synthase in plants.
25. (new) A method for producing plants with increased tocopherol, vitamin K, chlorophyll and/or carotenoid contents, which comprises expressing a DNA sequence coding for a 1-deoxy-D-xylulose-5-phosphate synthase and a second DNA sequence coding for a hydroxyphenylpyruvate-dioxygenase in plants.
26. (new) The method as claimed in claim 25, wherein the 1-deoxy-D-xylulose-5-phosphate synthase is encoded by the DNA sequence SEQ ID NO: 1 or SEQ ID NO: 3 or a DNA sequence which hybridizes with one of said sequences and coding for a 1-deoxy-D-xylulose-5-phosphate synthase and the hydroxyphenylpyruvate-dioxygenase is encoded by the DNA sequence SEQ ID NO: 5 or a DNA sequence which hybridizes with said sequence and coding for a hydroxyphenylpyruvate-dioxygenase.

27. (new) A process for transforming a plant, which comprises introducing an expression cassette comprising a promoter and a DNA sequence SEQ ID NO: 1 or SEQ ID NO: 3 into a plant cell, into callus tissue, a whole plant or protoplasts of plant cells.
28. (new) The process for transforming plants as claimed in claim 27, wherein the transformation takes place with the aid of the strain *Agrobacterium tumefaciens*, of electroporation or of the particle bombardment method.
29. (new) A plant with increased tocopherol, vitamin K, chlorophyll and/or carotenoid contents comprising an expression cassette as set forth in claim 27.
30. (new) The plant claimed in claim 29 selected from the group consisting of soybean, canola, barley, oats, wheat, oilseed rape, corn, and sunflower.
31. (new) A process for transforming a plant, which comprises introducing an expression cassette comprising a promoter and DNA sequences SEQ ID NO: 1 or SEQ ID NO: 3 and SEQ ID NO: 5 into a plant cell, into callus tissue, a whole plant or protoplasts of plant cells.
32. (new) The process for transforming plants as claimed in claim 31, wherein the transformation takes place with the aid of the strain *Agrobacterium tumefaciens*, of electroporation or of the particle bombardment method.

33. (new) A plant with increased tocopherol, vitamin K, chlorophyll and/or carotenoid contents comprising an expression cassette as set forth in claim 31.
34. (new) The plant claimed in claim 33 which is selected from the group consisting of soybean, canola, barley, oats, wheat, oilseed rape, corn or sunflower.